CHAPTER 1
PROJECT PLANNING AND EXECUTION

1-1. Introduction.

a. General.

(1) The U.S. Army Corps of Engineers (USACE) conducts munitions responses under the Military Munitions Response Program (MMRP) in accordance with (IAW) the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). The guidance provided in this Engineer Manual (EM) applies to all USACE munitions response projects. Refer to ER 1110-1-8153 and EP 1110-1-18 for additional information on the MMRP process. Refer to the ER 200-3-1 for specific requirements for Formerly Used Defense Site (FUDS).

(2) This EM guides a project delivery team (PDT) through the engineering and design requirements that will be addressed while planning a project involving munitions response. This EM also addresses the execution aspects of MMRP. This EM is subdivided into chapters representing the major components of a munitions response project that require PDT consideration. Checklists are provided in Appendix B to assist the PDT in assuring that all necessary items have been considered.

(3) The engineering considerations presented in this EM primarily address the actions taken to reduce the explosives safety risks associated with MEC. For additional information on the procedures for USACE personnel to follow when planning and executing a munitions response, review the USACE website for new guidance. For specific guidance on projects involving Recovered Chemical Warfare Materiel (RCWM), see EP 75-1-3.

b. Phases of the Military Munitions Response Process. The different phases of the munitions response process, for both remedial actions and removal actions, are summarized in Figures 1-1 and 1-2. These phases are described in detail in the ER 200-3-1. In accordance with the ER 200-3-1, the removal process alone cannot be used to make closeout decisions; all decisions regarding the need for further action or closeout will be based on the result of decisions made using the remedial process.

c. Application of these procedures may vary depending on the type of contracting methodology being used to execute the work; however, they should be used to the extent practicable.

1-2. Project Delivery Team (PDT). The PDT includes the Project Manager (PM), technical experts within or outside the local USACE activity, specialists, consultants/contractors, the

customer(s), stakeholders, representatives from other federal and state agencies, and vertical members from division and headquarters that are necessary to effectively develop and deliver the project. The roles and responsibilities of the PDT with respect to the munitions response process are defined in ER 200-3-1. Where PDT involvement is specified in this document, the PM will be responsible for determining specifically which members of the PDT should be involved in each particular part of the process. The PDT will implement the public involvement requirements specified in EP 1110-3-8 during the planning phase.

1-3. Technical Project Planning (TPP). During Military Munitions Response Program response actions (including investigation, removal and remedial actions to address the explosives safety, human health, or environmental risks presented by MEC and MC), PDT members implement the TPP process. This process is performed in accordance with EM 200-1-2, which describes the TPP process in detail and provides related documentation tools. In summary, the TPP process is a four phased approach involving a series of meetings during which the project goals and objectives, project data needs and data collection methods, and data quality objectives (DQOs) are discussed and agreed upon. The results of these meetings are recorded in a living document that is constantly updated based on the investigation's findings. Appropriate implementation of the TPP process ensures that all PDT members, including stakeholders, understand and agree upon the project's objectives, and that they concur with what is required to achieve project completion.

a. Phase I – Identify Project.

(1) The first phase of the TPP process involves the definition of the overall response objective for the project, as well as other related project objectives. It is crucial that the PDT clearly defines the response objective at the beginning of the process because all other elements of the TPP process are established based on this initial step and all subsequent project decisions will be made with the ultimate response objective in mind.

(2) To ensure that the response objective is appropriate for the project, all members of the PDT (technical personnel, decision makers, and stakeholders) are involved in the determination. It is at this time that the type(s) of response action(s) (remedial and/or removal) are discussed. The type of response action may differ based upon the different areas of interest or projects within a project property but the PDT ensures that the project's response action objectives are consistent with the overall project property response objective.

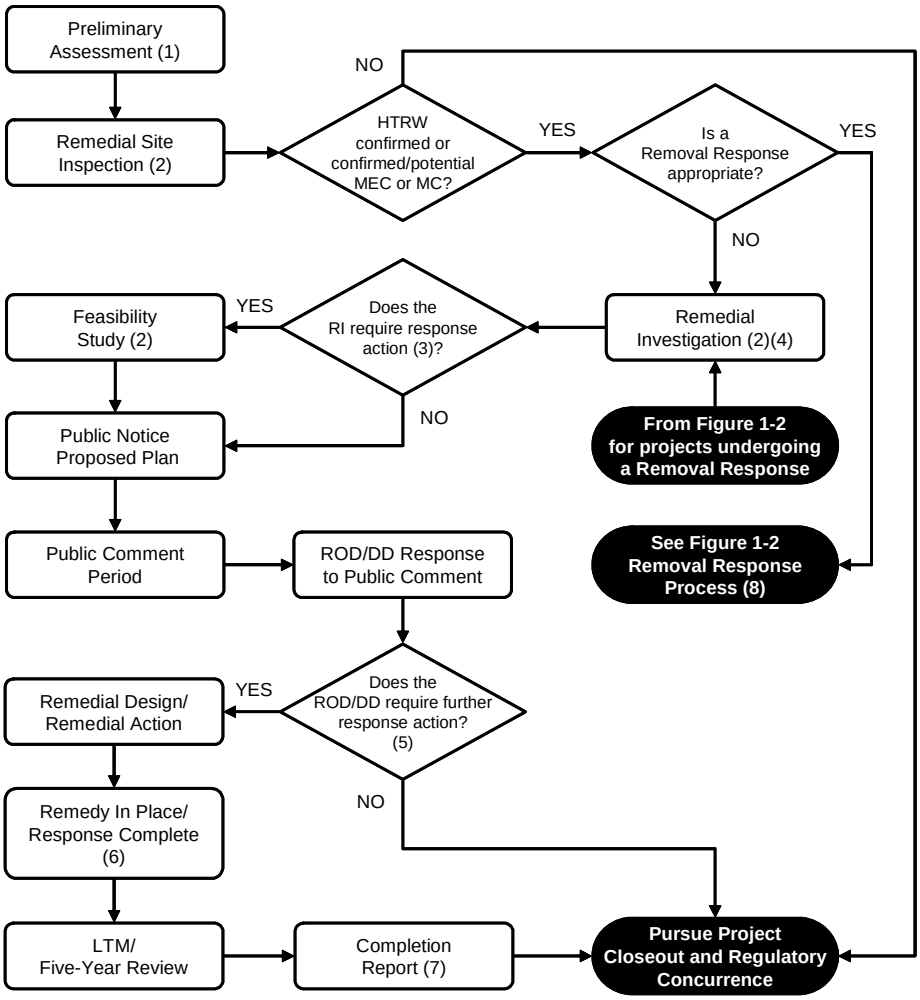

Figure 1-1. Remedial Response Process for MMRP Projects

Notes:

1. For new Inventory Project Reports, a Preliminary Assessment will be performed for eligible FUDS properties. If no hazards are identified during the PA, pursue property closeout and regulatory concurrence.
2. A removal response may be performed at any time during the process up until the ROD/DD signature.
3. Response action may include land use controls (LUCs).
4. If the removal response taken adequately addresses the risk or safety concerns at the project, the Remedial Investigation (RI) may be abbreviated. If LUC/5-Year Review/Long Term Monitoring (LTM) is required, evaluate them in the Feasibility Study (FS).
5. LUC/5-Year Reviews/LTM are required to be documented in the Remedial Design (RD).
6. See definitions in paragraph 4-4.7.2 and Figure 4-3 of the ER 200-3-1, April 2004.
7. Required by USACE FUDS policy.
8. Regardless of whether additional investigation/response is required following the removal action, the projects will transition back to the remedial response process.

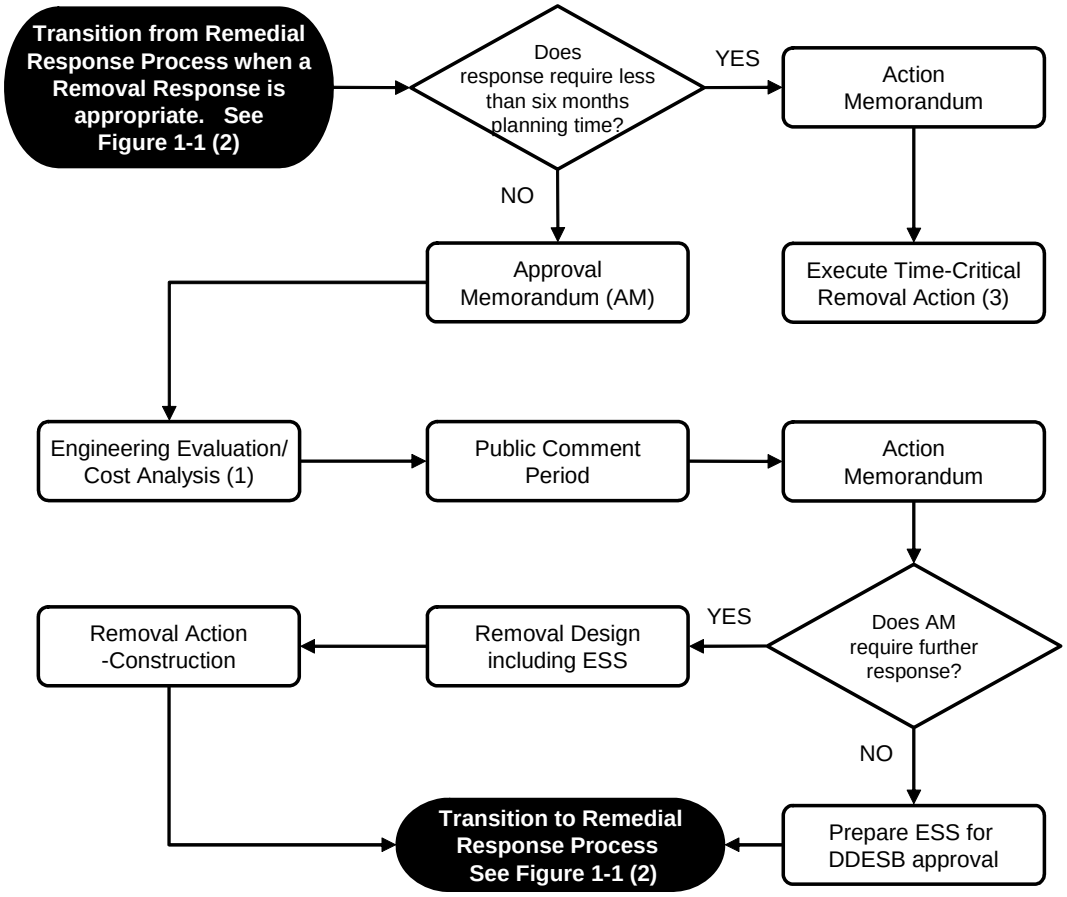

Figure 1-2. Removal Response Process for MMRP Projects

Notes:

1. A Time Critical Removal Action (TCRA) may be initiated during the EE/CA in which case an Action Memorandum is required prior to executing the TCRA. Then return to complete the EE/CA.
2. Regardless of whether or not additional investigation/response is required following the removal response, the project will transition to the remedial response process.
3. Transition to either the remedial (RI) or back to the removal process (EE/CA) after the TCRA.
4. A removal response cannot be used to achieve the Remedy-In-Place (RIP) or Response Complete (RC) milestones and property or project closeout cannot occur directly from a removal response. To achieve the RIP or RC milestones or property or project closeout requires a decision made through the remedial process.

(3) Available project property data is also gathered during Phase I of the TPP process. This data is used to prepare the preliminary conceptual site model (CSM), as well as to help in the identification of data gaps during the second phase of the TPP process. The preliminary CSM is a written and/or graphical representation that describes the current state of knowledge or assumptions concerning the explosive safety, human health, or environmental risks presented by MEC and MC at the project property. The CSM is a "living document" that is intended to be updated as the project progresses and new data becomes available. The actions involved with developing a CSM are described in EM 1110-1-1200.

(4) In addition to the preliminary CSM, documentation produced during this phase of the TPP process includes a Phase I Memorandum for Record (MFR). The Phase I MFR includes information concerning the TPP team members and their roles and responsibilities, the overall response objective for the project, and the individual project objectives, including closeout goals, schedule, and available project budget.

b. Phase II – Determine Data Needs.

(1) Following the definition of the response objective during the first phase of the TPP, the PDT identifies the data needs for the project. All potential data users will be involved in the identification of data needs. Data needs are determined by reviewing the project objectives and the available project property data discussed during Phase I. This process allows for the identification of data gaps, which in turn determines the data needs (type and quantity) for the current project.

(2) Before defining new data needs for the project, the data users will evaluate the usability of existing data, as these data may be suitable for qualitative and quantitative uses. For example, site reconnaissance data may be sufficient to indicate that a removal action is required in a given area; however, it may not provide enough information to evaluate the costs of conducting that removal action. In this case, the data need would be to determine both the lateral extent and depth of the MEC as they relate to the end use of the project property. To determine the lateral extent of the MEC additional field characterization activities may be needed. However, the expected depth of the MEC may be determined through documented past use of the project property. Another data need could be to determine where MEC are not present. This may allow for certain portions of the project property to meet the overall response objective sooner and consequently enable focus on those areas where MEC have been confirmed to be present.

c. Phase III – Develop Data Collection Options. The third TPP phase involves the development and documentation of the data collection methods that will be used to provide the data identified during Phase II. Selection of data collection methods will consider all decisions made and information collected throughout Phases I and II of the TPP process.

d. Phase IV – Finalize Data Collection Program.

(1) The final phase in the TPP process is to finalize and document the selected data collection options. The first step in this process involves the development of site-specific DQO statements for each identified data need. DQOs are qualitative and quantitative statements that describe the intended data use(s), the data need requirements, and the means to achieve acceptable data quality for the intended use(s). When data collection is complete, the DQOs will be evaluated to assure that the data need, and consequently the related project objective, has been met. Documentation of DQOs will ensure efficient project execution and attainment of project property-closeout in a timely fashion with minimal rework. DQOs are relevant to all aspects of the work performed on a project property. There are DQOs for location surveying and mapping, geophysical investigations, MC sampling, and geospatial data systems as described in Chapters 5, 6, 8, and 10.

(2) Based upon the defined DQOs, the investigation and sampling approaches are selected to meet the project data needs, based upon the data collection options identified during Phase III of the TPP process. When planning sampling approaches, the PDT considers potential sources of errors to ensure the data will meet the DQOs. The PDT then decides the most appropriate tools to determine the most appropriate data collection methods for the project property. Available tools for collecting the necessary data are also discussed in Chapters 5, 6, 8, and 10.

(3) The establishment of DQOs, as well as the selection of investigation and sampling approaches for a project results in the development of a data collection program that best meets the project objectives agreed upon during Phase I. The end product of the TPP process is the documentation of this final data collection program.

1-4. Safety. Safety is a critical component of all USACE activities and operations. Not all safety requirements for munitions response projects are addressed in this document, but the requirements are discussed in detail in ER 385-1-95, EP 385-1-95a, EP 75-1-3, DoD 6055.9-Std and applicable DA safety regulations. The MM CX may also be contacted for assistance.